

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION**

_____	)	
UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 4:11-cv-00077-RWS
	)	
AMEREN MISSOURI,	)	
	)	
Defendant.	)	
_____	)	

**PLAINTIFF UNITED STATES’ MEMORANDUM IN SUPPORT OF ITS MOTION FOR  
PROTECTIVE ORDER/ MOTION TO QUASH DEFENDANT’S SUBPOENA  
TO THE ELECTRIC POWER RESEARCH INSTITUTE**

**Exhibit C**

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION**

UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 4:11-cv-00077-RWS
	)	
AMEREN MISSOURI,	)	
	)	
Defendant.	)	

**PLAINTIFF UNITED STATES' RESPONSES AND OBJECTIONS TO DEFENDANT  
AMEREN MISSOURI'S FIRST SET OF INTERROGATORIES**

The United States of America, acting by the authority of the Attorney General and at the request of the Administrator of the United States Environmental Protection Agency ("EPA" or "Plaintiff"), hereby submits the following responses and objections to Defendant Ameren Missouri's First Set of Interrogatories ("Defendant" or "Ameren"). Plaintiff's response to each interrogatory is based upon information and documents currently known to it and in its possession. Plaintiff reserves the right to supplement its responses pursuant to Fed. R. Civ. P. 26(e) and has set forth in the responses some of the instances in which it currently anticipates doing so.

**GENERAL RESPONSE**

1. Subject to the general and specific objections stated below and pursuant to Fed. R. Civ. P. 33, Plaintiff responds to each of the interrogatories as set forth below.
2. By providing a substantive answer to an interrogatory, Plaintiff does not waive any of its general and specific objections to that or any other interrogatory.

6. the date or time period when you first determined that any Project constituted a major modification because, in whole or in part, the Project should have been expected to cause a significant net emissions increase of SO<sub>2</sub>.

**RESPONSE TO INTERROGATORY NO. 2(b):**

Plaintiff objects to Interrogatory 2(b) because it calls for information protected from discovery by the work-product doctrine, attorney-client privilege, deliberative process privilege, or otherwise seeks information protected from discovery by the Federal Rules of Civil Procedure and/or Discovery Agreements. Fed. R. Civ. P. 26(b). Plaintiff objects to this interrogatory as premature because it calls for data, information, conclusions, and opinions to be developed or discussed by expert witnesses where, as here, final expert reports have yet to be served. Finally, Plaintiff objects to this interrogatory to the extent that the information requested is protected from discovery under the Parties' expert discovery agreement. Without waiving these objections or its general objections, and subject to them, Plaintiff answers as follows:

Plaintiff intends to provide expert testimony to explain why the Projects at issue should have been expected to increase emissions of SO<sub>2</sub>. That testimony will be disclosed in accordance with the Court's case management order. Defendant will have a full and fair opportunity to depose any expert witnesses offered by Plaintiff on this issue.

Plaintiff prepared screening-level analyses of the Projects at issue to determine whether they should have been expected to increase emissions. Those analyses were done at the request of counsel and are privileged and attorney work-product. Plaintiff does not intend to rely upon these screening-level emissions estimates at trial or on summary judgment; experts will provide the analysis, as explained above.

Nonetheless, in a separate lawsuit filed in this Court, Ameren has sought to compel EPA to disclose its screening-level analyses of emissions pursuant to the Freedom of Information Act (“FOIA”). *See Ameren Missouri v. United States Environmental Protection Agency*, 4:11-cv-02051-AGF. One of the issues in the FOIA case is whether applicable legal privileges, including the attorney-client privilege and the attorney work-product doctrine, attach to EPA’s screening analyses. The summary judgment briefing on the FOIA lawsuit is complete. Having chosen the forum in which it wishes to resolve this issue, Defendant should await the Court’s ruling in the FOIA matter, rather than asking two Judges to review the same issue.

The screening-level air pollution analyses discussed below were performed to support the Amended Complaint filed against Ameren.

In addition to the air pollution analyses described below, and with respect to the Rush Island Unit 2 project in 2010, Plaintiff relied, in part, upon air pollution analyses performed by Ameren that were not disclosed or reported to EPA or the Missouri DNR at the time it was prepared. (*See* AUE-00170960 – 00170960.1). Information regarding this air pollution analysis is held by Defendant.

In preparing its screening calculations, Plaintiff calculated a conservatively low estimate of the air pollution increases that Ameren should have expected as a result of each Rush Island Project. The data necessary to perform these air pollution analyses are within the possession and control of Ameren. Plaintiff relied on information provided by Ameren in response to requests for information under Section 114 of the Clean Air Act. Reflecting the purpose of the PSD program to prevent excess air pollution before it occurs, applicable law requires a source to project its post-modification air pollution before it undertakes construction. Plaintiff performed

its air pollution analyses based on information available to Ameren prior to performing the modifications.

Using information available to Defendant prior to each Project, Plaintiff concluded that Defendant should have expected the Project to result in a significant net emissions increase of SO<sub>2</sub>. In making that determination, Plaintiff first identified the increase in hours of operation enabled by the Project and multiplied those increased hours by the production rate to arrive at the increase in generation, in megawatt hours ("MWhrs"), caused by the Project. For coal-fired electric generating units, the production rate is the Net Output Factor. The Net Output Factor is a unit's net actual generation divided by the product of its service hours and net maximum capacity. Plaintiff then calculated any increases in generation due to any increases in Unit capacity as a result of the Project. Plaintiff then added the generation increases due to the Project to the Unit's generation during the baseline period to arrive at the total post-Project generation from the Unit. The calculation isolates the generation increase, if any, due solely to the Project, and does not include generation increases due solely to demand growth or other factors independent of the Project.

Second, Plaintiff converted total post-project generation into total post-project emissions using an emissions factor for the relevant pollutant derived from Defendant's own emissions data for the Unit. In this step, Plaintiff accounted for any significant heat rate improvements that Ameren stated in its own Project documents that it expected to gain from the Project at the Unit.

Third, Plaintiff subtracted the Unit's emissions of SO<sub>2</sub> during the applicable baseline period from the total post-Project emissions of SO<sub>2</sub> to determine the air pollution increase, if any, attributable to the Project. If the difference between total post-Project emissions and baseline emissions was positive, and if that increase was greater than 40 tons per year for SO<sub>2</sub>, then

and may be contacted through counsel for Plaintiff: Lisa Hanlon, EPA Region 7; Jon Knodel, EPA Region 7; Eric Sturm, formerly EPA Region 7.

**INTERROGATORY NO. 3:**

**With respect to the emissions calculation method(s) you identified in response to Interrogatory Nos. 2(b)(2) and 2(c)(2):**

**a) Identify all factual and legal bases which you contend authorizes and/or permits your use of those method(s), including any documents (including administrative guidance, federal or state statutes or regulations, interpretations, hearing testimony, expert testimony, applicability determinations, and/or responses or comments to rulemakings) that discuss, analyze or describe any such method; and**

**RESPONSE TO INTERROGATORY NO. 3(a):**

Plaintiff incorporates by reference its General Responses and General Objections, above. Plaintiff also objects to this interrogatory to the extent it seeks legal determinations or conclusions regarding the applicable guidance, regulations, and statutory provisions at issue in this case. These legal determinations will be made by the Court in this case. Without waiving these objections or its general objections, and subject to them, Plaintiff's response to Interrogatory 3(a) is set forth below.

The bases for Plaintiff's air pollution analyses can be found in the versions of the Missouri SIP and EPA's PSD regulations that applied the time of the Projects. Prior to 2006, EPA's PSD regulations, 45 Fed. Reg. 52,676 (Aug. 7 1980), applied through substantially equivalent provisions of the Missouri SIP at 10 C.S.R. 10-6.060(8). Additionally, EPA's preamble and PSD regulations at 57 Fed. Reg. 32,314 (July 21, 1992) clarify EPA's 1980 PSD regulations for electric generating units. The PSD rules require a source to predict, before undertaking a project, whether a change "would increase the actual annual emission of a pollutant above the actual average for the two prior years." *Env't'l Defense v. Duke Energy*

*Corp.*, 549 U.S. 516, 569 (2007); 40 C.F.R. § 52.21(b)(3)(i), (b)(21)(ii). The 1980 rules use a conservative assumption for projecting increases at units that have not “begun normal operations” – an actual-to-potential test. 40 C.F.R. § 52.21(b)(4) (1980) (defining “potential to emit”), 10 C.S.R. 10-6.020(2)(P)(18) (4/30/99) (same); 40 C.F.R. § 52.21(b)(21) (defining “actual emissions”); 10 C.S.R. 10-6.020(2)(A)(4) (4/30/99) (same); see *Puerto Rican Cement Co. v. EPA*, 889 F.2d 292, 296-99 (1st Cir. 1989); see also 56 Fed. Reg. at 27,633. When it promulgated the rules, EPA stated that it would generally apply the conservative actual-to-potential test to modifications, which recognized EPA’s initial presumption that a unit that undergoes a non-excluded change has not begun normal operations in the post-change period within the meaning of the rules. 45 Fed. Reg. at 52,677, 52,699; see *Puerto Rican Cement*, 889 F.2d at 297; 61 Fed. Reg. 38250, 38254 (July 23, 1996).

Following *Wisconsin Electric Power Co. v. Reilly*, 893 F.2d 901 (7<sup>th</sup> Cir 1990), EPA clarified the 1980 PSD regulations with respect to the applicable emissions test for electric generating units (“EGU’s”). Commonly known as the WEPCO Rule, EPA’s 1992 revisions to the PSD rules allowed existing electric utilities to side-step the question of whether a facility had “begun normal operations” in determining how to predict future emissions. See 57 Fed. Reg. 32,314, 32,317, 32,325 (July 21, 1992). Instead, utilities could simply compare “actual emissions before the change to their projections of actual post-change emissions.” *New York*, 413 F.3d at 16; see 40 CFR 52.21(b)(33) (1998) (defining “representative future actual emissions”); 57 Fed. Reg. at 32,317, 32,324. However, as a condition of allowing the presumptive use of the more flexible actual-to-projected test, EPA required that any facility electing to use that method to demonstrate that project was not expected to trigger NSR to also submit emissions data for five to ten years after the project. 40 C.F.R. § 52.21(b)(21)(v) (1998);

57 Fed. Reg. at 32,325. Thus, where an owner or operator of an EGU relies on a projection of actual emissions to conclude that the project would not trigger NSR, the owner/operator must submit post-change records each year following the change sufficient to determine whether the project actually increased emissions and triggered NSR. 57 Fed. Reg. at 32,325. These clarifications to the 1980 PSD regulations comprise the “representative actual annual emissions” test in the 1992 WEPCO Rule. If a projection of representative actual annual emissions shows that a project would result in a significant net emissions increase of a regulated pollutant, then NSR is triggered.

Under the plain meaning of the 1992 WEPCO Rule, the representative actual annual emissions test does not apply where an electric utility either fails to prepare a representative actual annual emissions projection or where the electric utility fails to comply with the reporting requirements. 40 C.F.R. § 52.21(b)(21)(v) (1998) (representative actual annual emissions test applies “*provided* the source owner or operator maintains and submits to the Administrator on an annual basis for a period of 5 years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase.”) (emphasis added). Instead, EPA may rely on the actual-to-potential test to show that a project has triggered NSR. In addition, if post-project data shows that emissions did, in fact, increase as a result of the project during any one of the five years following the project, then PSD has been triggered and the source is required to obtain a NSR permit from the regulatory authority. 57 Fed. Reg. at 32,325.

On June 27, 2006, EPA approved Missouri’s adoption of the Federal NSR reforms (“NSR Reform Rules”), published in the Federal Register on December 31, 2002. See 67 Fed. Reg. 80186 (Dec. 31, 2002); 71 Fed. Reg. 36,486 (June 27, 2006). With exceptions not



applicable here, this action thereafter made EPA's NSR Reform Rules federally enforceable in Missouri through the Missouri SIP. *See* 10 C.S.R. 10-6.060(8)(A). In the NSR Reform Rule, EPA largely retained the representative actual annual emissions test, renaming it as the "actual-to-projected-actual applicability" test and making it available to all source categories, not just EGU's, subject to certain recordkeeping and reporting requirements. 40 C.F.R. §

52.21(a)(2)(iv)(c), (r)(6). Similar to the 1992 WEPCO Rule, sources using this emissions test must maintain a record of the description of the project, the emissions unit whose emissions could be affected by the change, and a description of the applicability test used to determine the project is not a major modification. 40 C.F.R. § 52.21(r)(6)(i). Owners or operators of EGUs using the actual-to-projected-actual applicability test are required to submit post-change records for at least five years following the change. 40 C.F.R. § 52.21(r)(6)(iii), (iv). The purpose of these recordkeeping and reporting requirements is to create a "paper trail to allow enforcement authorities to evaluate a source's claims concerning what amount of an emissions increase is related to the project and what amount is attributable to demand growth." 72 Fed. Reg. 72,607, 72,611 (Dec. 21, 2007). As with the 1992 WEPCO Rule, if an owner or operator of an EGU fails to comply with these recordkeeping and reporting requirements, then it may not rely on the actual-to-projected-actual emissions test to determine PSD applicability. 40 C.F.R.

§ 52.21(r)(6). Instead, EPA may rely on the actual-to-potential test to show that a project has triggered NSR. In addition, if post project data shows that emissions did, in fact, increase as a result of the project during any one of the five years following the project, then PSD has been triggered and the source is required to obtain a NSR permit from the regulatory authority. 40 C.F.R. § 52.21 (r)(6); 72 Fed. Reg. 72,607. Moreover, based on both the 1992 WEPCO Rule and NSR Reform, to the extent a source attempts to rely on post-project actual emissions data, it

may do so only if: 1) it first prepared an initial projection prior to undertaking the project; and 2) it complied with applicable recordkeeping and reporting requirements. If the source meets these two conditions, it may only rely on post project actual data as evidence of the reasonableness or unreasonableness of its initial projection.

In determining baseline emissions for an EGU under either the 1992 WEPCO Rule or the NSR Reform Rule, an owner or operator may use as a baseline for the emissions projection any two year period in the five years before the project, provided the baseline period is representative of normal source operations. 57 Fed. Reg. 32,325; 40 C.F.R. § 52.21(b)(48)(i).

In projecting future emissions from an EGU under either the representative actual annual emissions test or the actual-to-projected-actual applicability test, a source considers all relevant information, including but not limited to historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with State or Federal regulatory authorities, compliance plans under the approved State Implementation Plan and compliance plans under Title IV of the Clean Air Act. *See* 40 C.F.R. § 52.21(b)(33)(i) (1998); 40 C.F.R. § 52.21(b)(41)(ii)(a). "[P]ast operating history, and other relevant information, provides a basis for reasonable projections." 57 Fed. Reg. at 32,323.

The future actual emissions projection is the product of: (a) the hourly emissions rate and (b) projected capacity utilization, which is based on the unit's historical annual utilization and all available information regarding the unit's likely post change capacity utilization. *Id.* Under the 1992 WEPCO Rule, the projection of post-project utilization is presumptively based on the annual average of the two years immediately following the project. 57 Fed. Reg. at 32,323, 32,325. Under the NSR Reform Rules, the projection of post-project emissions can be based on

any one of the five years following the date the unit resumes regular operation, or any one of ten years if there was a capacity increase at the Unit. 40 C.F.R. § 52.21(b)(41)(i).

As an affirmative defense, emissions that the unit could have accommodated during the baseline period and that are unrelated to the change, including any increases due to demand growth, should be excluded from the projection of future emissions. This is known as the demand growth exclusion. 40 C.F.R. § 52.21(b)(33)(ii) (1998); 40 C.F.R. § 52.21(b)(41)(ii)(c). The 1992 WEPCO Rule made clear, however, that “where the proposed change will increase reliability, lower operating costs, or improve other operational characteristics of the unit, increases in utilization that are projected to follow can and should be attributable to the change.” 61 Fed. Reg. 38,250, 38,268 (1996).

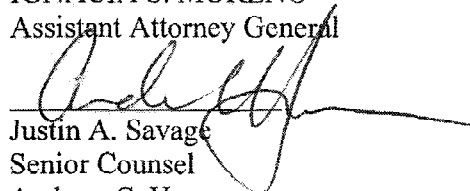
In addition to the foregoing regulations, Plaintiff’s air pollution analyses are also grounded in publicly available guidance in the form of applicability determinations that identify EPA’s longstanding interpretations of the PSD regulations and their application in specific cases. Several such applicability determinations are identified in response to Interrogatory No. 3(b), below. Finally, Plaintiff’s air pollution analyses identified in response to Interrogatory No. 2(b) are grounded in the longstanding industry practice of and method for identifying generation increases expected to result from replacing failing major components at coal-fired generating units, including the following industry publications which are being produced with these responses:

- Electric Power Research Institute, “Economic Evaluation of Plant-upgrading Investments, Vol. 1: Summary Report” (February 1985)
- Electric Power Research Institute, “Economic Evaluation of Plant-upgrading Investments, Vol. 2: Case Studies” (February 1985)

**Plaintiff United States' Responses and Objections to Defendant Ameren Missouri's First Set of Interrogatories.**

Dated: April 30, 2012

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**VERIFICATION**

I, Lisa Hanlon, declare under penalty of perjury that I am employed by the United States Environmental Protection Agency, that I have read the United States' Responses and Objections to Defendant Ameren Missouri's First Set of Interrogatories served in *United States v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS), that the information set forth in the Response No. 1 is based upon information reviewed by me, and that the response to this interrogatory is true and correct to the best of my knowledge.

4-30-12  
DATE

Lisa Hanlon  
Lisa Hanlon

**VERIFICATION**

I, Jon Knodel, declare under penalty of perjury that I am employed by the United States Environmental Protection Agency, that I have read the United States' Responses and Objections to Defendant Ameren Missouri's First Set of Interrogatories served in *United States v. Ameren Missouri*, Civil Action No. 4:11-cv-00077-RWS), that the information set forth in the Response Nos. 2 through 6 are based on information reviewed by me, and that the responses to these interrogatories are true and correct to the best of my knowledge.

4-30-2012  
DATE

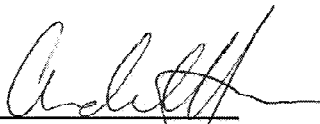
Jon P. Knodel  
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**CERTIFICATE OF SERVICE**

I hereby certify that on April 30, 2012, I served the foregoing via email on counsel of record, who are listed below:

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